[CLAIMS]

1-5. (CANCELED).

6. (CURRENTLY AMENDED) A method of operating a drive motor driving both a tractor, via a tractor drive, and a trailer, via a traveling power takeoff shaft, the traveling power takeoff shaft having at least three discrete, shiftable power takeoff gear stages and the traveling power takeoff shaft being connected to the drive motor,

the method comprising the steps of:

defining higher and lower motor rotational speed threshold values and providing the higher and the lower motor rotational speed threshold values to an electronic system for controlling the drive motor and the [[the]] power takeoff gear stages ~~higher and lower motor rotational speed threshold values for the drive motor~~;

determining by a speed sensor one of a wheel speed and a vehicle speed; and

~~by operation of~~ operating the electronic control [[and]] responsive to the one of [[a]] the wheel speed and [[a]] the vehicle speed,

controllingly conforming a rotational speed of the traveling power takeoff shaft to a ratio of at least one of the determined vehicle speed and the determined wheel speed by adjusting slip operation of the traveling power takeoff shaft and rotation of the motor so that the tractor and the trailer travel at substantially a same speed;

comparing the determined one of the wheel speed and the vehicle speed to the ~~defined~~ higher and the lower motor rotational speed threshold values; and

shifting a power takeoff stage to one of a corresponding next higher and [[the]] a next lower discrete shiftable power takeoff stage, upon attainment of one of the higher and the lower motor rotational speed threshold value, so as to maintain an optimal traveling speed for both the tractor and the trailer so that both the tractor and the trailer travel together substantially as an integrated unit at substantially the same speed.

7. (PREVIOUSLY PRESENTED) The method according to claim 6, further comprising the step performed by the electronic control of compensating for a difference, when starting from a zero speed, between a speed of rotation at said zero speed and the lower threshold speed of rotation of the motor, by utilizing a greater clutch-slippage of the traveling power take-off shaft.

8. (PREVIOUSLY PRESENTED) The method according to claim 6, further comprising the step performed by the electronic control of achieving, in a case of self-driven trailers, with a knowledge of slip, by an evaluation by the electronic system, an optimal speed of rotation ratio between the tractor and the trailer.

9. (PREVIOUSLY PRESENTED) The method according to claim 6, further comprising the step performed by the electronic control of adjusting the ratio of the vehicle speed to the traveling power take-off shaft speed of rotation to a current demand by manual intervention during travel.

10. (CURRENTLY AMENDED) A method of operating a traveling power takeoff shaft connected by a power take-off slip clutch to a drive motor for driving a trailer and the drive motor also driving the tractor, the method comprising the steps of:

providing at least three discrete, shiftable power takeoff gear stages;

sensing a wheel rotational speed with a sensor;

defining and providing to an electronic system, for controlling the drive motor and the [[the]] power takeoff gear stages, a lower motor rotational speed threshold value ~~to correspond~~ which corresponds to a next lower power takeoff stage of the least three discrete, shiftable power takeoff stages; and

~~by operation of the electronic control and responsive to the wheel rotational speed,~~

adjusting rotation of the power takeoff by the power take-off slip clutch to match rotation of the drive motor to the wheel rotational speed

comparing the wheel rotational speed to the lower motor rotational speed threshold value;

shifting to the next lower power takeoff stage when the rotational speed of the drive motor achieves the lower motor rotational speed threshold value; and

maintaining an optimal travel speed for both the tractor and the trailer, by shifting to a desired one of the least three discrete shiftable power takeoff stages, so that both the tractor and the trailer travel together with one another substantially as an integrated unit and at a substantially identical speed.

11. (PREVIOUSLY PRESENTED) The method according to claim 10 further comprising the step performed by the electronic control of compensating for a difference in the drive motor rotation speed between a zero rotation speed and the lower motor rotation speed threshold value when, starting from the zero rotation speed, by allowing clutch slippage of the traveling power take off shaft.

12. (PREVIOUSLY PRESENTED) The method according to claim 10 further comprising the step performed by the electronic control of utilizing clutch slip and the electronic system to optimize a speed of rotation ratio between the tractor and the trailer, in a case of self-driven trailers.

13. (PREVIOUSLY PRESENTED) The method according to claim 10, further comprising the step performed by the electronic control of adjusting a ratio of the vehicle speed to the rotation of the traveling power take-off shaft to current demand by manual intervention during travel.

14. (CURRENTLY AMENDED) A method of operating a traveling power takeoff shaft that is connected to a drive motor and the traveling power takeoff shaft having at least three discrete, shiftable power takeoff shaft gear stages and the drive motor also driving rear wheels of a tractor, the method comprising the steps of:

monitoring ~~at least one of~~ a vehicle travel speed ~~and a rear wheel rotational speed~~ with a sensor; and

by operation of the electronic control and responsive to the ~~at least one of a~~ vehicle travel speed ~~and a rear wheel rotational speed~~,

adapting a rotational speed of the power takeoff shaft to conform to one of the vehicle travel speed and the rear wheel rotational speed, so that a towed trailer travels at substantially a same speed as a speed of the vehicle, by [[one]] each of:

electronically shifting the traveling power takeoff shaft to a next higher takeoff shaft gear stage of the least three discrete, shiftable power takeoff stages, if a rotational speed of the drive motor essentially equals an upper rotational speed threshold;

electronically shifting the traveling power takeoff shaft to a next lower takeoff shaft gear stage of the least three discrete, shiftable power takeoff stages, if the rotational speed of the drive motor essentially equals a lower rotational speed threshold; and

adapting slip engagement of the clutch of the power takeoff shaft to match a difference between the rotational speed of the power takeoff shaft at a vehicle travel speed of zero and the lower rotational speed threshold of the drive motor to a predefined ratio.

15. (PREVIOUSLY PRESENTED) The method according to claim 6, further comprising the step performed by the electronic control of defining the at least three discrete shiftable power takeoff stages to comprise a low stage, an intermediate stage and a high stage.

16. (PREVIOUSLY PRESENTED) The method according to claim 15, further comprising the step performed by the electronic control of defining the low stage as approximately 540 RPM, the intermediate stage as approximately 750 RPM and the high stage as approximately 1000 RPM.

17. (PREVIOUSLY PRESENTED) The method according to claim 10, further comprising the step performed by the electronic control of defining the at least three discrete shiftable power takeoff stages to comprise a low stage, an intermediate stage and a high stage.

18. (PREVIOUSLY PRESENTED) The method according to claim 17, further comprising the step performed by the electronic control of defining the low stage as approximately 540 RPM, the intermediate stage as approximately 750 RPM and the high stage as approximately 1000 RPM.

19. (PREVIOUSLY PRESENTED) The method according to claim 14, wherein the at least three discrete shiftable power takeoff stages comprise a low stage, an intermediate stage and a high stage.

20. (PREVIOUSLY PRESENTED) The method according to claim 19, further comprising the step of defining the low stage as approximately 540 RPM, the intermediate stage as approximately 750 RPM and the high stage as approximately 1000 RPM.

21. (PREVIOUSLY PRESENTED) The method according to claim 20, further comprising the step of defining a ratio of power take-off rotational speed to wheels rotational speed as approximately 40 to 1.

22. (PREVIOUSLY PRESENTED) The method according to claim 20, further comprising the step performed by the electronic control of operating the power take off shaft at vehicle speeds of between 2.5 to 10 km/h.

23. (PREVIOUSLY PRESENTED) The method according to claim 20, further comprising the step performed by the electronic control of obtaining different ratios between rotational speeds of the wheels and the traveling power take-off shaft.

24. (PREVIOUSLY PRESENTED) The method according to claim 6, further comprising the step of connecting the traveling power takeoff shaft to the drive motor via a clutch, and

by operation of the electronic control adjusting slip of the clutch to optimize the ratio of the rotational speed of the traveling power takeoff shaft to at least one of the determined vehicle speed and the determined wheel speed.

25. (CANCELED)

26. (NEW) A method of operating a power takeoff shaft of a tractor that is connected, via a slip clutch, to a drive motor and the power takeoff shaft having at least three discrete, shiftable power takeoff shaft gear stages, including a low stage, an intermediate stage and a high stage, the method comprising the steps of:

monitoring a travel speed and a motor speed of the tractor with sensors;

initiating travel of the tractor by adjusting the motor speed and adjusting rotation of the power takeoff shaft, via the slip clutch such that the rotational speed of the power take off shaft matches the travel speed of the tractor;

electronically shifting the power takeoff shaft to the intermediate stage, when the motor speed equals a next higher rotational speed threshold;

further adjusting the motor speed and further adjusting the rotation of the power takeoff shaft, via the slip clutch such that the rotational speed of the power take off shaft matches the travel speed of the tractor; and

electronically shifting the power takeoff shaft to either the low stage or the high stage of the power takeoff, when the motor speed equals a respective one of a lower rotational speed threshold or a subsequent next higher rotational speed.